

Hatchery Update

Carson National Fish Hatchery



production until 1976, when the last fall chinook salmon were released into the Wind River. Carson NFH currently operates under the Columbia River Fisheries Development Program producing spring chinook salmon exclusively.

Facilities at Carson NFH include 46 raceways, two rearing ponds, and two adult holding ponds. The main water source for the hatchery is Tyee Creek.

Hatchery Goal

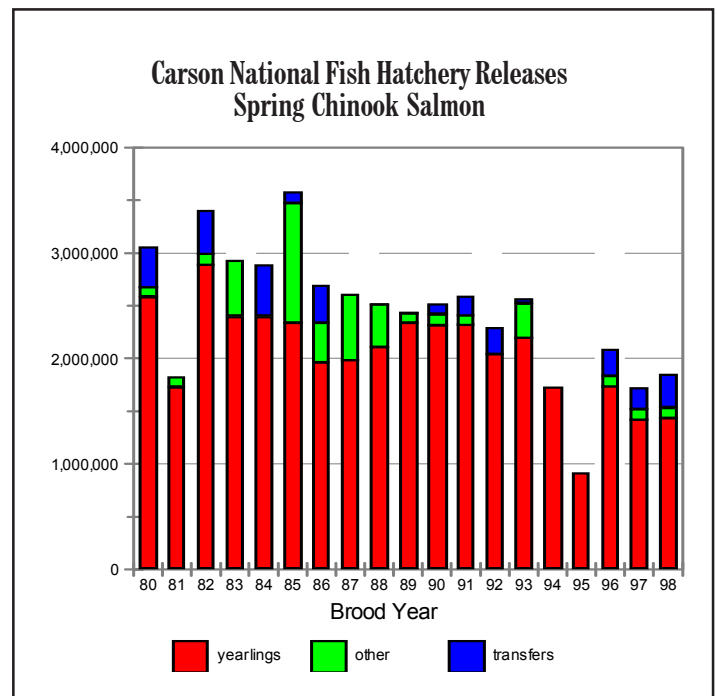
Today the U.S. Fish and Wildlife Service operates Carson National Fish Hatchery to restore and maintain upriver Columbia River chinook salmon stocks. This stock provides a popular sport fishery in the Wind River and supports our Federal Tribal Trust Responsibilities.

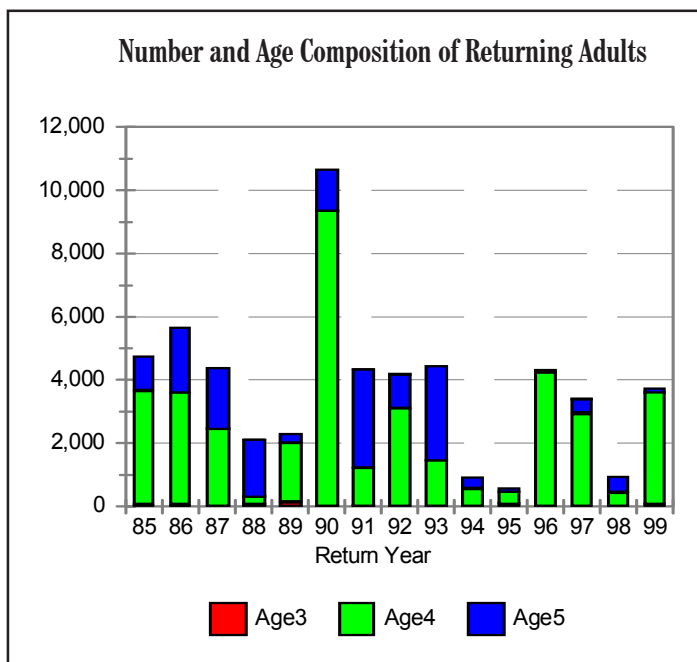
Introduction

The U.S. Fish and Wildlife Service operates 12 National Fish Hatcheries (NFH) and one Salmon Culture Technology Center in the Columbia River basin. The Columbia River Fisheries Program Office (CRFPO) works with 6 of these facilities to evaluate release programs and special studies. The CRFPO maintains the Service's hatchery database for these facilities as well.

About Carson National Fish Hatchery

The hatchery is located 13 miles northwest of Carson, in Skamania County, Washington. It is situated at the confluence of the Wind River and Tyee Creek. The facility began producing fall chinook salmon and resident trout in 1938. Early attempts to introduce spring chinook salmon into the Wind River between 1938 and 1940 met with little success. At that time, salmon could not return to the hatchery due to impassable Shipperd Falls, two miles upstream from the mouth of the Wind River. The hatchery was remodeled in 1956 under the Mitchell Act in order to establish a run of spring chinook salmon in the Wind River. At this time, a fish ladder was built at Shipperd Falls to allow salmon passage. Spring chinook salmon production began to take precedence over other





Adult Escapement Goal

A return of 1200 adult salmon is needed to collect enough eggs for a full production of 1.42 million fish for onstation release and transfer of 100,000 pre-smolts to the Umatilla River.

Sampling of Returning Fish

A proportion of returning adults are sampled at the hatchery for biological information. Sex and length are recorded and scales are collected so that age can be determined. All fish are sampled for coded-wire tags. By using sample information and the number of returning fish, it is possible to calculate the number of returning fish for each age group and, consequently, the number of fish returning from each brood year or release year. On average, for the past 15 years, 2% of Carson's spring chinook have returned as three year old male jacks, 64% as four year old adults, and 34% as five year old adults. In 1999, 95% of the adult fish sampled were age four.

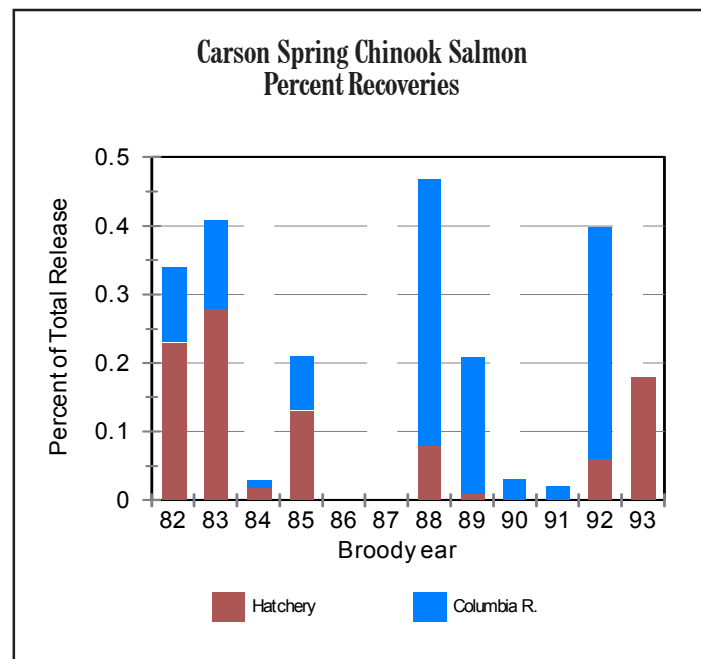
The number of fish returning from a hatchery release is influenced by early rearing at the hatchery, downstream migration, ocean conditions, and the harvest rate in the various fisheries.

Contribution

The marking program has made it possible to determine survival rates and contribution to fisheries. Since

broodyear 1980, an average of 72% of adults return to the hatchery while remaining recoveries of Carson spring chinook salmon occur almost exclusively in the Columbia River with the majority of fish harvested in the freshwater sport fishery, followed by tribal treaty and subsistence fishery, and Columbia River gill net fishery. Less than 1% of broodyear 1993 adults were recovered in the Columbia River.

Survival for the Carson NFH spring chinook averages 0.24% of the total number of fish released. Total survival for broodyear 1993 was 0.18%.



For more information, please contact:

Stephen Pastor
Columbia River Fisheries Program Office
9317 Highway 99, Suite I, Vancouver, WA 98665
360-696-7605 or email stephen_pastor@fws.gov

Bill Thorson, Hatchery Manager
Carson National Fish Hatchery
14014 Wind River Highway
Carson, WA 98610
509-427-5905 or email bill_m_thorson@fws.gov
www.r1.fws.gov/gorgefish/



CRiS database management provided by Stephen Pastor
Produced by Donna Allard, CRFPO Information and Education
<http://www.r1.fws.gov/crfpo>